Amendments to the Drawings:

The attached sheets of drawings includes changes to Figures 1, 2, 3, 7, 8 and 9. These sheets, which include Figures 1, 2, 3, 7, 8 and 9 replace the original sheets including these figures. Captions in Figures 1, 2, 3, 7, 8 and 9 have been changed. In addition, in Figure 3, an arrow has been added to the line connecting elements 14 and 15.

Attachment: Replacement Sheets

Annotated Sheets Showing Changes

104

Other Users

112
CAMERA

108
MICROPHONE

102

114
SEE

Short Term Memory and Long Term Memory

106

1...   ...7...
...B...
...3...

100
USER(s)

SAY

Controlled Device

1 2 ... 9 0

a w ... o p

Television

Server

116

Toggle, Keys, TouchScreen, and/or Pressure Pad and short term memory storage **110**

Backup database memory to handheld unit, mapping long term memories

Server

Figure 1. ~~Invention~~ Application Concept

Speak Name while Signed **5**

Sequenced Display **7**

Say Character as Seen **9**

See **8**

Stylus **3**

Sign **6**

Signature Pad **2**

User **4**

Personal Digital **10** ~~Figure 2. e-presence Application~~
Assistant(PDA)
(e.g., Palm Pilot®) with invention
technology in an ASIC contained in
microphone attachment.

Microphone **1**

Figure 2. e-presence Application

Figure 3. Invention System Interface

Graphic Atomic Description (15) [Character Generator] **38**

GUI **33**

User Interface(11) [Commercial display, microphone, pen interfaces]

STM **32**

ASIC Core Model(14)

Sequence **35**

Clocking

37

Atomic Features(16) [voice and written analysis]

36

TeleCom Interface

Location **34**

GPS Location(12) [Commercial RF location devices]

LTM **31**

Remote Mass Storage Server(13)

Figure 7. User Authentication ID Application ~~with the invention technology~~

39 — User and/or RW inputs (incorporate evolving formats)

44 — LTM

RDB Storage
> Linking of STM synthesis to LTM OD representation in tuple using predicate calculus structure of (noun/verb/object/label)
> $\tilde{P}_m$, $\tilde{L}_m$ axis definition and TC/NN class decision surface storage with adaptive threshold d as tuple fields
> Subspace N' mapping from N-D OD in STM synthesis
> NN taxonomy to OD N-D space for common knowledge formation via mutual user interaction
> dynamic control of AC uncertainty in LTM building across user group with min/max d range

47 — User and/or RW outputs

40 — Respond to input Stimuli (emotional sensing)

41 — Capture user/RW input exemplars (input atomic attribute level)

43 — Store Modeled Synthesis (use of Internet, LAN, and remote server methods)

45 — Retrieve and Use Modeled Synthesis (use of Internet, LAN, and remote server methods)

46 — Generate output response - Request new input (forced choice confusion for user knowledge extraction)

42 — STM

Synthesized OD Model Construction
> OD as singular, linked points in N-D space with axis fidelity coupled to projected densities
> subspace representations of N-D expression (with N, N'; M, M' mapping)
> atomic attributes as subspace projections with HOS fidelity driven by OD
> correlated, non-orthogonal fractal axis cells with Eq. (13) - (17) projections including concurrency utilization
> NN to capture N-D space cell correlation
> NN, TC, and generalized decision modules for class filtering
> class filtering using projections with asymmetric HOS; Hermite moment density, and feature evaluation
> TC use of random seed, local normalization, addresses linked to worldline, and expansion to N = infinity

---

OD Model Use and Dynamics
> liquid/gas model on $\rho(\bar{x}_m)$ density representation dynamics
> synthesis feedback from MV features on 2-D OD subspace projections
> chunking of OD elements with user viewpoint to minimize entropy H
> SD metric and ballon matrix $\tilde{D}$ metric as search strategy feedback in min(H) OD synthesis
> AC as a dynamic metric in using d, τ and crn to minimize feedback cycle time
> AC for OD transformation with equivocation on C_L latency cost; construction of CC limits on information (known) flow and BW limits on data (unknown) flow; and fidelity represented by CC, CF and Re.

Figure 8. Invention Method Flow Chart

50

STM
_____

Components of:
➢ Floating Point Scaling
   Processor and Memory
➢ Fixed Point Storage,
   Multiplier, Adder,
   Processor and Memory
➢ Store and Retrieve
   Processors and Memory,
   Interface to Mass Storage
➢ Control Processor of
   Parameters and Testing
   Decisions with Memory
➢ Synthesis Processing
   Codes

49

Data Capture
Input Device

48

User and/or
RW Inputs

54

Communication
Devices of Internet,
LAN, and remote
servers

51

LTM
_____

RDB
Storage

52

Data Generator
Output Device

53

User and/or
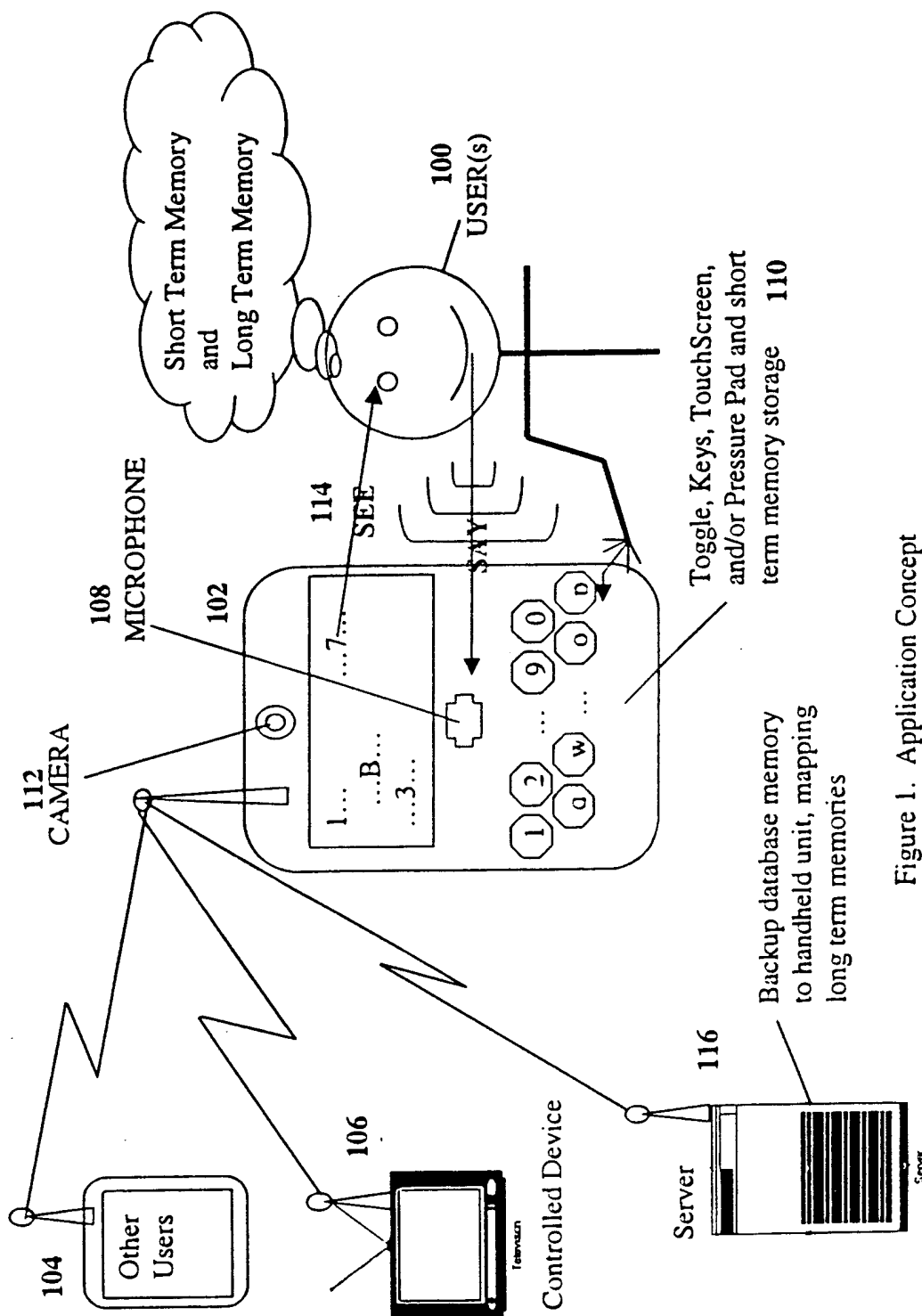RW outputs

Figure 9. ~~Invention~~ System Generic Block Diagram
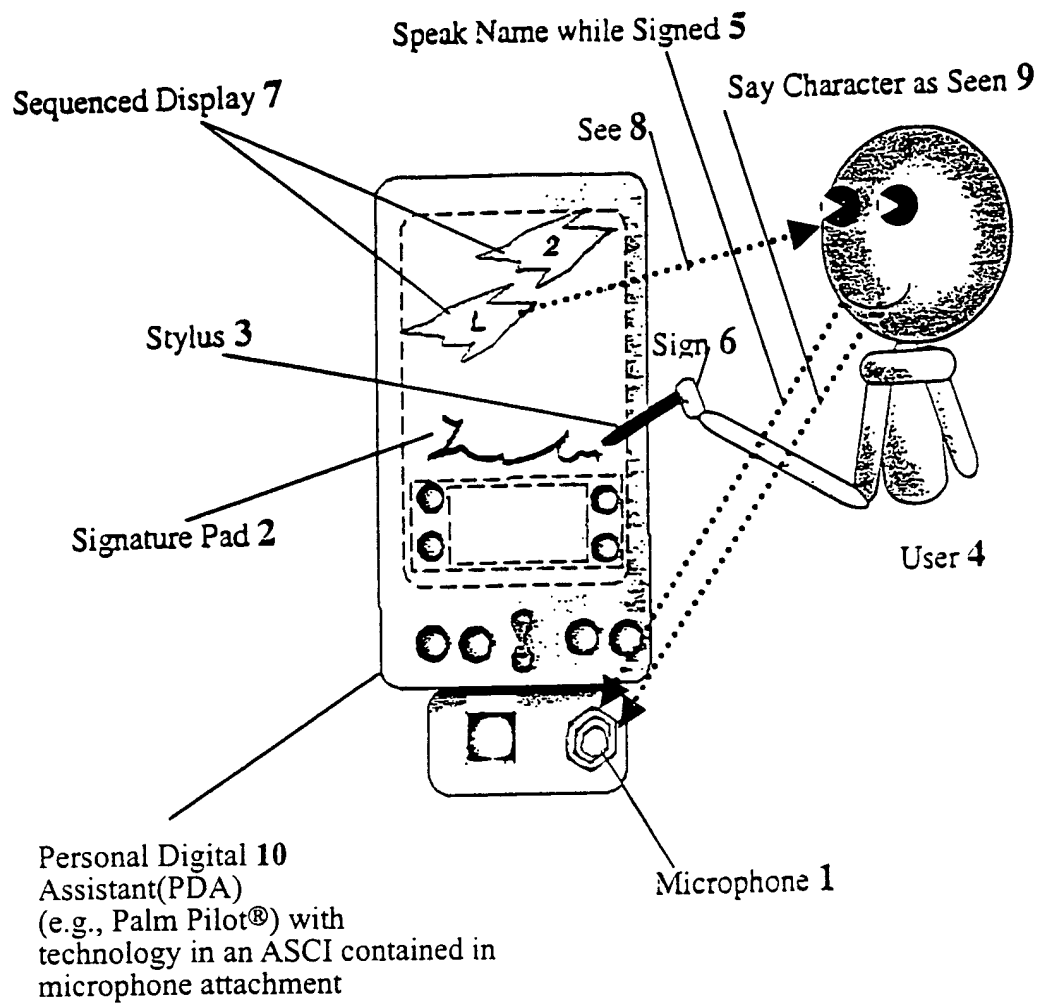
Figure 1. Application Concept
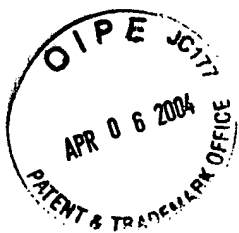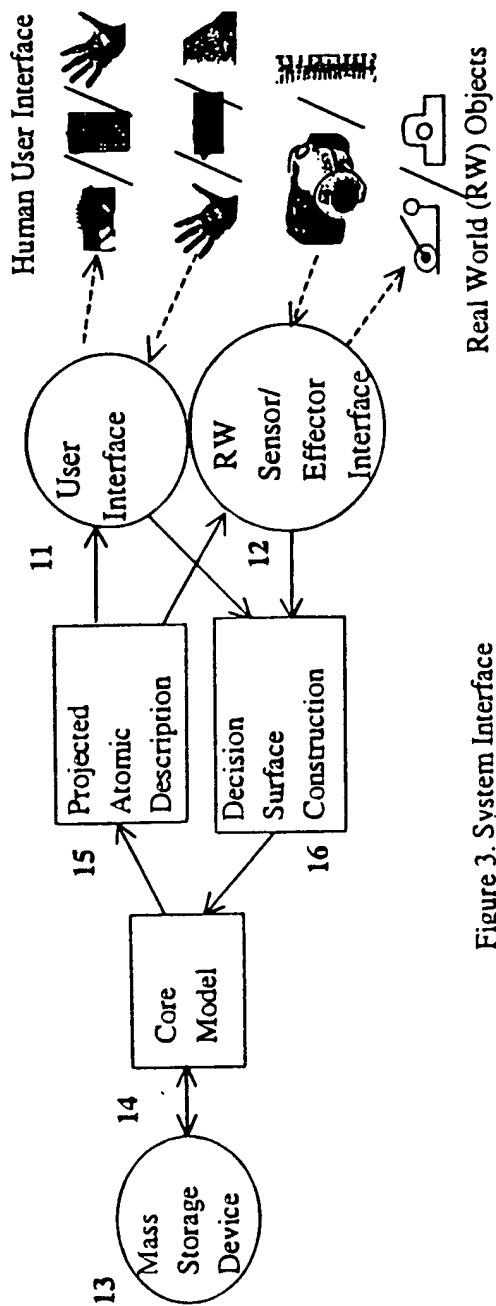
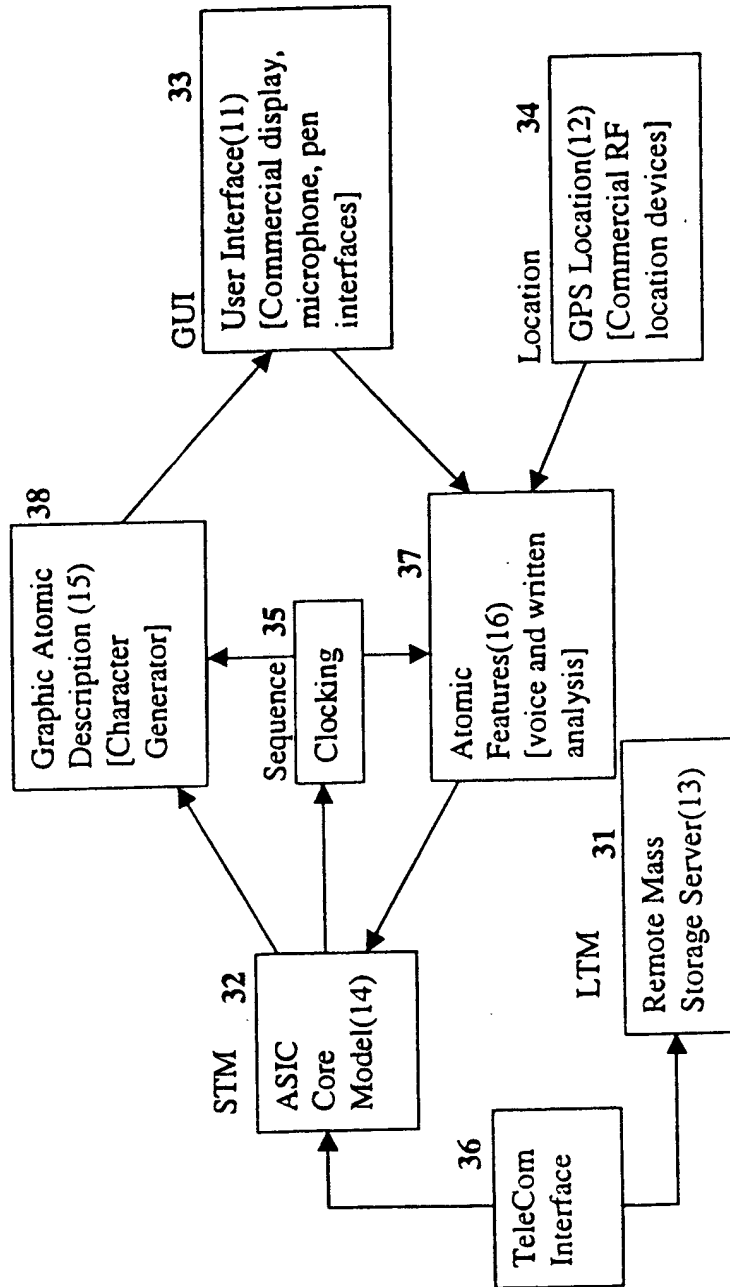Figure 2 e-presence Application

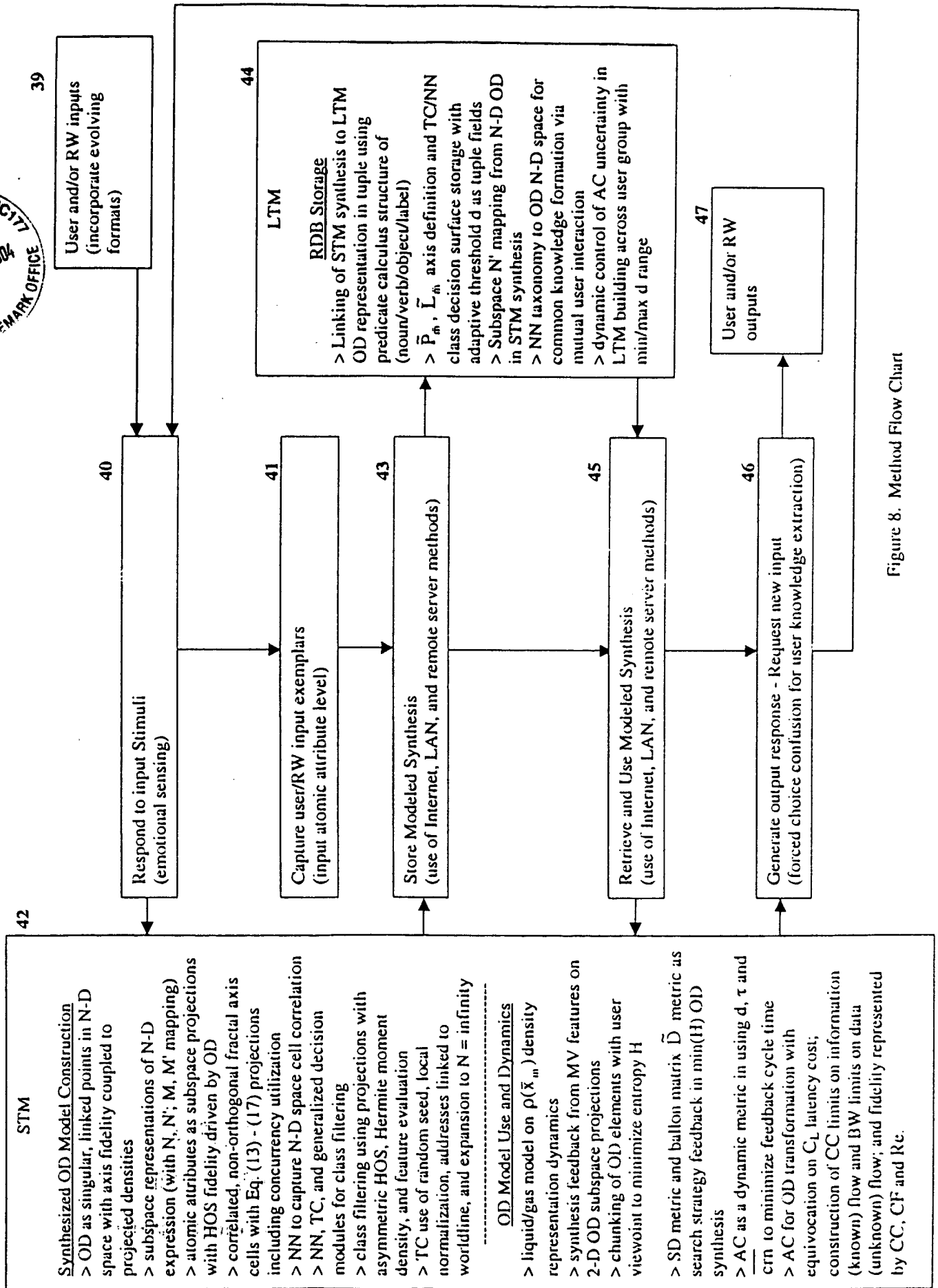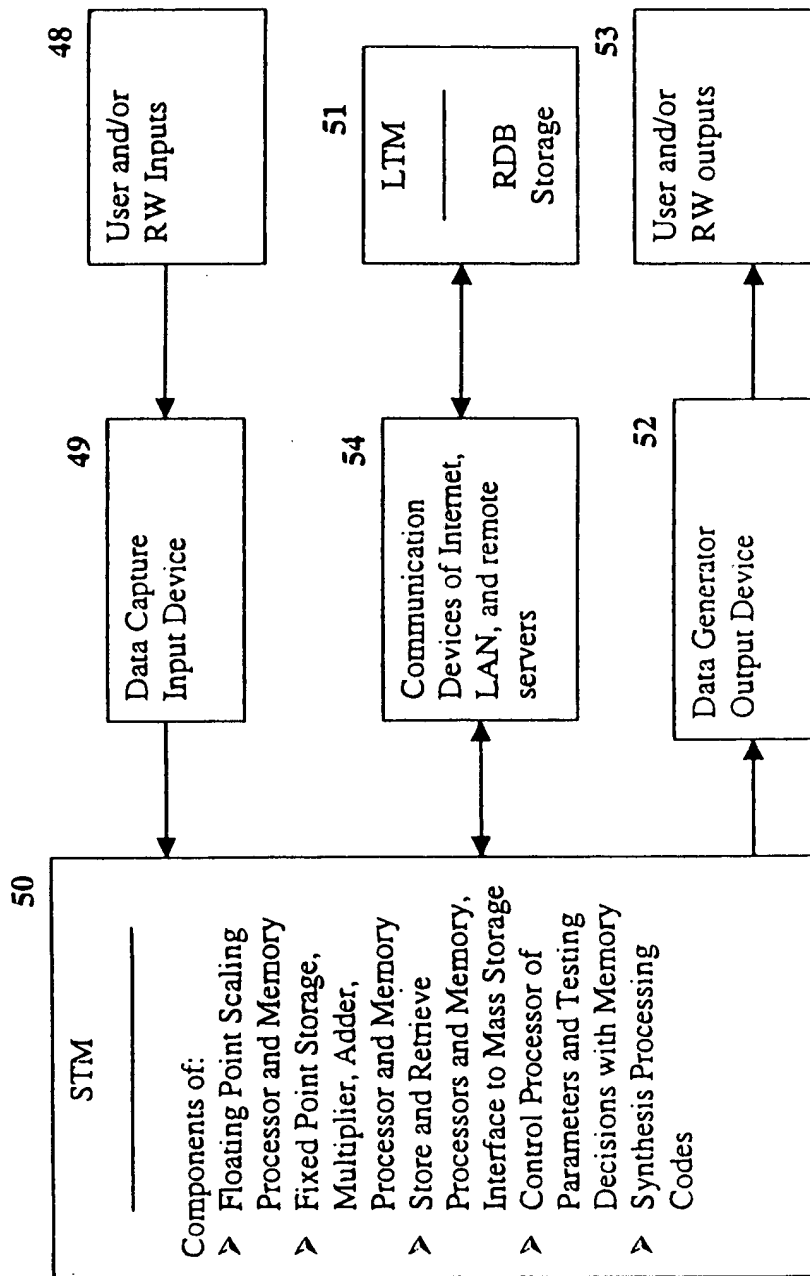Figure 3. System Interface

Figure 7. User Authentication ID Application

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Figure 8. Method Flow Chart

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Storage

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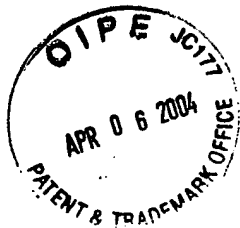 Parameters and Testing
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